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ABSTRACT

Historical developments in the 18th and 19th centuries influenced the course of European and American education and the separate path of vocational education. The first of these developments was the emergence of schools as primary instruments for the transmission of knowledge and culture, as a result of the phenomenal growth of the American states during the 19th century and the needs of burgeoning industries for trained manpower. Another factor that affected the course of American education was the development of new models for the delivery of practical education in Europe and the changes that took place in these forms when they were transported to the United States. Some of these models included trade and technical schools, technical institutes, Lancastrian schools, manual labor institutes, mechanics institutes, and academies. In America, trade and technical schools were well endowed and became places of learning for elite upper-class architects, engineers, and other master builders, while the technical institutes, also private, trained the lower-level technicians. The academies originally offered both classical education and vocational education, but because of the influence of the New York State Board of Regents, these schools eventually became elite college preparatory schools. Taking a cue from these academies, middle class parents and educators pushed the public high schools of the late 1800s into the classical mode, shutting out the poor of the time while catering to only about 7 percent of the population. As a reaction to such elitism, the Smith-Hughes Act was passed in 1917, establishing vocational education as a separate entity, which it has often remained to the present. (KC)

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19th CENTURY ROOTS TO THE AMERICAN VOCATIONAL MOVEMENT

by

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19TH CENTURY ROOTS TO THE AMERICAN VOCATIONAL MOVEMENT

by

Gordon F. Law

The aim of this paper is to place in historical perspective some 19th century developments in education that had an influence on the American vocational movement of the early 1900's. Within this context, special attention has been given to four phenomena, namely:

1. The emergence of schools as primary instruments for the transmission of knowledge and culture.

2. The development in Europe of new models for the delivery of practical education, and the changes that took place in these forms when they were transported to the United States.

3. The special role of the American academy in the advancement of popular, practical and secular secondary education, and

4. The series of events during the late 1800's that produced a college preparatory mission for American high schools, and the impact of this condition on the vocational education movement that followed.

THE EMERGENCE OF SCHOOLS

The 19th century, more than any prior period in history, was a time of revolutionary change. Fueled by the driving force of commerce and industry on both sides of the Atlantic, the western culture which had developed through centuries of evolution was quite suddenly undergoing a remarkable transformation. The ways in which people would live and work, engage in government, settle national and fratricidal disputes, and transmit customs, skills, knowledge and beliefs from one generation to another, were all undergoing an accelerating succession of changes. In the United States, where industrial development had been delayed until after the War of 1812, the period between 1820 and 1860 was one of unprecedented growth: the population multiplied ten times -

from five to fifty million; the ratio of people living in cities to those in rural areas changed from one in fifteen to one in three; great strides were made in transportation, first with the building of turnpikes, then canals, and finally railroads. In 1840, it was reported that the country had 2,799 miles of railroad track; forty years later, 94,671 miles had been laid down.[1]

In the early days of the industrial revolution, the rapid gains in productivity were not so much the result of scientific development as they were derived from the ingenuity of practical craftsmen. Even the steam engine was not the result of a scientific breakthrough but a refinement of known principles. But soon, in fields of banking and insurance, ocean navigation, land development, bridge building, rail transportation, and commercial enterprises, there was a growing demand for people who could write, design, calculate, navigate, survey, oversee, account and perform other tasks in the new society. These roles called for advanced schooling -- for a much greater proportion of the general population. In time these new schools would compete with, and even substitute for, home, family, church and workplace as the custodians of knowledge and transmitters of culture.[2]

Of the many new forms of schools that appeared during the 1800's, two main population groups were served, the new middle class and the landless poor. Among the schools designed to serve the educational needs of the burgeoning middle class were academies, literary institutes, female seminaries, proprietary schools of commerce, fashion or industry, technical institutes, normal schools, mechanics institutes, and various types of colleges, including those providing instruction in agriculture and mechanical arts. Of the people attending these institutions, whether in England, Europe, or the United States, many

were the first in their families to go to school beyond the primary grades as higher forms of learning had until this time been reserved for a small and select group preparing for one of the learned professions.

In addition to these institutions were schools for the less fortunate victims of social change. Beginning in the late 1700's and continuing through the 19th century was the steady development of schools for the walking wounded of industrial society. Supported mainly by private funds were farm and labor schools, such as those founded in Switzerland by Pestalozzi and Fellenberg,[3] reform and orphan asylums, and urban industrial schools for the children of the poor.[4]

The historic connection between charitable schools and vocational education can be found in the mission statements of many such institutions, as the development of "some useful skill" is frequently mentioned.[5]

THE DECLINE OF APPRENTICE TRAINING

Although not completely eliminated by the new industrial order, apprentice training was rendered less effective through the 18th and 19th centuries. The decline of apprenticeship as the principal instrument for the transmission of occupational skills and knowledge created a need for a legitimate substitute. In many situations the substitute was to be a school.

During the French Revolution, which reached a crescendo in 1791, the Guilds were abolished as "trade aristocracies."[6] This elimination of the formal vehicle for apprentice training, together with the assassination of many guild masters, led to a severe shortage of skilled

manpower. A few years later, under the direction of Napolean Bonaparte, national schools of arts and trades and additional technical schools were established.[7]

In the United States, apprentice training systems for both free and indentured servants had come over with the Mayflower, but in the period of rapid expansion that took place in the 1800's, the number of boys who could be made to participate in a five or six year training program at relatively low wages did not yield an adequate supply of skilled mechanics; employers were learning that the products of European trade schools and apprenticeships were quite happy to work for American wages, which were higher than in the "old country."[8]

Another cause for the diminution of apprentice training in both Britain and America was the advent of the factory system. Despite England's sixty to seventy year lead, it was in the United States that a more complete breakdown of handcraft skills was affected. The so-called "American System" of manufacturing, employing the development of interchangeable parts and the reduction of tasks previously performed by skilled mechanics into simple operations carried out by women and children, contributed to the abolishment of many skilled trades.[9]

EUROPEAN APPROACHES TO PRACTICAL SCHOOLING

Since virtually all forms of practical schooling attempted in the United States during the 1800's were of European origin, it seems appropriate to trace the origins and describe the characteristics of some of them, and assess the changes that transpired when they were adopted by the new country.

As has been mentioned, the French pioneered in the development of both trade and technical schools; they also can be credited with the advancement of education in art, music and drawing, and the development of the first national system of education.[10]

The trade schools originated in the French Republic, together with similar institutions established in Austria, Belgium, Bavaria, Prussia and Switzerland, were quite different from farm and industrial schools for pauper children. Selective and rigorous, sponsored by nationalistic governments striving to catch up in the growing competition for military/industrial supremecy, trade schools were looked upon as investments in human capital. Intended for future master mechanics rather than ordinary journeymen, they gave heavy emphasis to the study of mathematics and science, mechanical and architectural drawing, and related trade theory.[11]

It was from these models that the first trade schools in the United States were patterned. The New York Trades School, established in 1881 by Richard T. Auchtmuty, a wealthy architect, was planned expressly to break the domination of trade unions in the preparation of skilled mechanics. Heavily endowed with private funds that included a half-million dollar grant from J. P. Morgan, the New York Trades School served as an exemplary model for other such institutions that appeared in the years prior to 1917.[12]

As with their schools for teaching trades, European nations also sponsored the establishment of technical institutes. Not considered to be of college level, schools for the preparation of chemists, engineering technicians, and designers were established in France and other

European states, typically with the financial support of government and industry. In some instances, trades and technical subjects were taught in the same institutions, but a more common pattern was for the establishment of separate institutions.

The heavy commitment of European states to both trade and technical education is evident in the reports of these systems published in Henry Bernard's "American Journal of Education,"[13] "Education," and other 19th century publications. A case in point is an article appearing in the April, 1895 issue of "Education,"[14] which describes the manual and technical schools of Belgium. In this tiny country, no less than 123 separate schools for boys and 36 girls' schools were reported to be in operation. Of the girls' schools, 19 were involved in domestic industry, 5 combined domestic industry with technical instruction, and 12 were technical schools. The boys' schools were classified as trade schools (43), technical schools (13), and industrial schools (37). Costs for the operation of these institutions were shared by the State (37%), Province (12%), Commune (31%), and private sources (20%).[15]

In the United States the preparation of technicians was left more to private initiative. Aside from the West Point Military Academy, which served as the first American school to teach civil engineering, the early development of technical education was confined to a few private institutions. Prior to the Morrill Act of 1862, a few colleges notably Harvard and Yale, had instituted scientific schools or departments but the systematic and organized preparation of engineering technicians had to wait for the land grant college movement.

Other European innovations in practical education that found their way to the United States were Lancastrian schools, manual labor institutes, mechanics' institutes, and academies.

The Lancastrian, or Monitorial system of teaching, which became all the rage in eastern American cities during the first three decades of the 19th century, may be thought of as an early application of the factory method to an educational process. Brought to America by Joseph Lancaster, an English clergyman, the system utilized student monitors, who worked under the direction of one instructor to teach large groups of students -- all learning the same items at the same time. The primary object of this approach was to reduce per-pupil cost to a bare minimum. Despite the bad pedagogy, harsh discipline and stereotyped results, the Lancastrian approach to teaching made an important contribution to the common school movement by demonstrating that the education of masses of children was economically feasible.[16]

Manual labor schools were brought to American by Robert Owen, who experimented with various interpretations of Pestalozziasm in New Harmony, Indiana community, and by Joseph Neef, a former assistant to Pestalozzi.[17] By the 1820s a number of schools, notably, the Germantown, Pennsylvania Academy, Bronson Alcott's Temple School in Boston, the Gardiner School, Maine Lyceum, and the Oneida Institute of Science and Industry at Whitesborough, New York, all applied some of the principles of Pestalozzi and Fellenberg in their instructional program.[18] Although each of these institutions had unique characteristics, with

goals, student populations and curricular offerings quite different from one another, they all paid homage to Pestalozzi and Fellenberg as sources of inspiration for their ventures in work related schooling and school based work.

The British mechanics institute movement, founded in 1800 by Dr. George Birkbeck of Glasgow, continued to flourish for another fifty years.[19] Originally sponsored by college professors and dissenting ministers, who conducted classes for apprentices, journeymen and other industrial workers, the movement was taken over by the workers themselves. With hundreds of institutes in operation by the 1820s in virtually every industrial city and town, the movement became a powerful force in the drive for the improvement of working conditions. The working class orientation of their membership led naturally to the development of a labor party and to the sponsorship of legislation more favorable to working people. Other products of the British mechanics institute movement were the development of public technical schools and eventually, to the so-called red brick "peoples colleges" of England.[20]

The American mechanics institutes which were formed in large numbers in the 1830s, took a different path than their British counterparts. Based more on the ideas of Benjamin Franklin, they were in the main learning centers for a proprietor class of builders, master mechanics, owners and public officials.[21] Little of the labor class orientation was found in the American institutes.

THE AMERICAN ACADEMY MOVEMENT

The American academy, which became the principal vehicle for secondary schooling in the mid-1800s, was derived from three European ancestors, namely: the Latin Grammar School, British Dissenting Academies, and German Realschulen. Latin Grammar schools which devoted their instruction to Greek and Roman language and culture, had as their main mission the preparation of students for university study, or for direct entry into one of the learned professions. The British Dissenting Academies were products of the Restoration. When the monarchy returned to power in 1660 under Charles the Second, the ministers who had broken away from the official Church of England were forbidden to practice. Having lost their principal livelihood, these learned men turned to the establishment of schools. Critical of the traditional classics schools, the founders of dissenting academies, inspired by the leadership of John Milton, developed a new curriculum that gave room to the study of modern languages, English, mathematics, geography and the emerging field of science. To use contemporary jargon, the dissenting academies of the 1600s were early forms of alternative schools.[22]

The German Real School Movement had its origins in the early 1700s when August Hermann Franke, Professor of oriental languages at the University of Halle and a practicing Lutheran minister, began to incorporate practical knowledge and information in his classes of religious instruction. From this beginning, Johann Julius Hecker, who

had been working under Franke, moved on to Berlin, where in 1747 he founded an institution known as the Royal realschule, which gave a new emphasis to the study of art, science, trades and industries. As in England, this curriculum was in sharp contrast to the classics orientation of the Gymnasium.[23] Although coming from different social climates and philosophical perspectives, the British academies and German realschules were remarkably similar in the subjects they considered important.

Since the academies were private institutions, their treatment by education historians has been limited. Aside form the work of Miller,[24] Sizer,[25] Church,[26] and Brown,[27] little has been written about the remarkable academy movement. Historians of vocational education, including Barlow,[28] Bennett,[29] Mays,[30] and Roberts,[31] have given virtually no attention to the American academies, despite their singular role in the advancement of work-related education and their direct influence on the nature and mission of the public high school.

Seen as transitional bridges between Latin Grammar and public high schools, American academies reached a pinnacle in numbers and prestige in the decade before the Civil War. In 1856 the total number of such schools was reported to exceed 6,000, with more than a quarter of a million students enrolled.[32] The three main missions of academies, carried out through a multitude of courses, were college preparation, a general academic preparation for "life", and occupational competency -- in agriculture, business, sea navigation, teaching or engineering technology.

In addition to their significant role in the extension of secondary schooling to include vocational subjects, academies were also innovative in terms of their introduction of coeducation, and their success in attracting large numbers of students from a relatively broad range of social and economic backgrounds.[33] The total impact of these institutions in the move toward universal secondary education, is a phase of American history that deserved more attention.

VOCATIONAL EDUCATION IN AMERICAN ACADEMIES

The mission statement of many American academies to be "all things useful and all things ornamental" was first articulated by Benjamin Franklin. His 1749 "Proposals Relating to the Education of Youth in Pennsylvania" set forth a model for a new kind of school, sensitive to the educational needs of young people born into a rapidly changing world. Rather than dwell on the "dead hand of the past", Franklin recommended that the American academy should prepare its students for the future by giving them instruction in mathematics and science, history and geography, modern foreign languages and, what was most radical at the time, that various social classes, including "those of the poorest sort", should receive instruction in the practical aspects of school teaching, farming, commerce and industry.[34] Franklin's thinking of what an academy should be was far ahead of its time; the Academy and Charitable School he helped establish, which later became the University of Pennsylvania, failed to carry out the progressive mission he envisioned as its trustees carried out a more traditional classics curriculum.

While collecting data for a paper on 19th century American academies, presented at the March, 1982, meeting of the American Educational Research Association,[35] the author found that, of twenty-five academies studied, twenty-two were giving some form of vocational instruction.

TABLE I

DISTRIBUTION OF VOCATIONAL EDUCATION COURSES
(BY OCCUPATIONAL FIELD)

New Jersey Academies	Pennsylvania Academies	New York State Academies
Chester (2,4,5)	Acadian (2,4,5,6)	Delaware (2,4,5,6)
Freehold (1,2,3,4,5,6)	Bleck's (2,4,5,6)	Farmers Hall (2,4,5)
Hightstown (2,4,5,6)	Cedar Hill (2,6)	Newburgh Academy (2,4,5)
Morris (2)	Hopewell (2,4,5)	Newburgh Academy (2,4,5,6)
Mount Holly (None listed)	Fremont (2,5,6)	Washington Academy (None listed)
Oaklands (2)	Ercildown (2,5,6)	Susquehanna (2,4,5,6)
Newark Academy (2,3,4,5,6)	Marietta (2,4,5,6)	Warwick (2,4,5)
Newark Weslyan (2,3,4,5,6)	Weaversville (2,4,5,6)	
Rutgers Academy (None listed)		
West Jersey (1,2,3,4,5)		

Number Code: 1-Agriculture, 2-Business & Commerce, 3-Technology (civil industrial, or mechanical), 4-Navigation, 5-Surveying, 6-Teaching*Cedar Hill Female Seminary listed a domestic department, but provided no details of its curriculum.

Table 1 shows that business subjects were taught in 22 academies, surveying 19, navigation 17, teacher preparation 14, some form of technology in four schools, and agriculture in two. The mission statements that appeared in academy catalogs makes it clear that during the 1840-1860 period, the preparation of students for proprietorship or employment in specific occupational fields was an important element in many of these schools. Only a small proportion of these academies, such as Morris and Rutgers in New Jersey, and Washington Academy in Warwick, New York had concentrated on the classics and general academic programs to the exclusion of vocational offerings; the more common configuration was that of Freehold and Newark Academies in New Jersey, Acadian, Bleck's, Marietta and Weaverville Academies in Pennsylvania, and Delaware Academy in Delhi, New York, where a considerable variety of vocational courses were provided.

The fact that academies in New York State had less variation than in Pennsylvania or New Jersey can be attributed to the influence of the New York State Board of Regents. Established in 1784, the "University of the State of New York," headed by a Board of Regents had by the 1840s, taken important steps in the control and standardization of schools under its jurisdiction. With respect to academies, the Regents Board determined that they should be the principal vehicles for the preparation of common school teachers by identifying academies in each senatorial district to have normal departments, and by specifying the curriculum in each. Through the combined force of law and regulation, sweetened by direct grants to schools

and scholarships for students, the New York State Board of Regents were instrumental in the establishment of the first state system of teacher education in the nation.[36]

In addition to its early role in teacher preparation, the New York State Regents made important contributions to the determination of a standard curriculum for both incorporated academies and public high schools. Through a series of legislative actions, administrative decisions and amendments in regulation the Regents exerted considerable influence on the shape and form of secondary education. Through its powers of school and program approval, together with the prescriptive application of financial assistance, the Board of Regents established a rather uniform curriculum by the 1870s, some twenty years before there was a concerted national move in this direction.[37]

THE CHANGING MISSION OF ACADEMIES

Although the actions of the New York State Board of Regents were confined to only one state, they were applied to the state which had the largest number of academies. Having inadequate data at this time, one can only speculate that the sharp reduction in course offerings that took place in New York academies between 1860 and 1880, especially in those courses with vocational components, was a significant element in the national trend that changed academies from multi-purpose institutions to prep schools. At least, the role of the Regents appears to have been a contributing factor.

Probably a more important contribution to the demise of academies as multi-purpose institutions was their inability to provide quality instruction in a variety of classical, general academic and vocational fields of specialization. Not only were many academies skirting bankrupcy, since they had to depend on the financial support of local patrons, they were also marginal in the supply of faculty memebers with adequate knowledge of all the subject listed. As noted by Sizer, many of their so-called practical subjects were "taught from a book".[38]

The rapid decline of academies was also caused by the proliferation of alternative delivery systems. By the 1870s, no less than nine types of educational institutions had assumed some part of the multi-purpose mission that had previously been attempted by academies. These were:

agricultural schools
engineering schools, college departments engineering colleges
liberal arts colleges (more than 500 of them)
private business schools and "colleges"
public high schools
normal schools
land grant colleges
agricultural-technical institutes
technical institutes

The private secondary schools that survived this wave of competition, together with some new academies established in the 19th century, tended to concentrate on college preparation. This move on the part of private schools, which in eastern states had a virtual monopoly in college admissions, seems to have contributed to a corresponding change in the mission of public high schools, which, by the 1890s, was to culminate in the formal adoption of a classics

oriented college preparatory curriculum as THE appropriate program for ALL high school students.

HOW PUBLIC HIGH SCHOOLS BECAME PREPARATORY INSTITUTIONS

It is understandable that private academies of the late 1800s should have changed their mission to the single purpose of college preparation. For the public high schools to take the same path, in a period when they were serving less than 7% of their student potential, appears in retrospect to have been a tragic blunder. The narrow and elitist posture of these so-called exponents of democracy and the American way, and their inability to provide for the educational needs of a burgeoning urban and restive rural population, provided fuel for a mounting wave of disenchantment that eventually led to some school reforms. It also provided the stimulus for the establishment of a separate and relatively independent system of vocational education, insulated from the influence of generalists, and supported with federal monies made available by the Smith-Hughes Act.

The American high school, according to Good, arose in at least three ways: as the product of definite plan; through the transformation of an existing academy; and by the gradual development of advanced work in an elementary school.[39] The first of these patterns, the development of a high school according to plan, was found in Boston and neighboring cities in the 1820s, Philadelphia in 1836, and in Harrisburg, Lancaster, and York, Pennsylvania soon after. The transition of private academies to the status of public "free academy" was most common in small towns and cities, especially in upstate New York.

The third method of high school dvelopment, through the extension of elementary schooling, appeared to be most common in rapidly growing frontier communities.

The frequent changes in form and mission of public high schools was noted by Good in his statement that "the high school began as a school for boys but soon admitted girls also. It began as a terminal school similar to the realist academy, but assumed classical college-preparatory functions, in mid-career undertook to give vocational education, and should now, in the opinion of some, become the universal school for all American youth."[40]

Although conceived by Horace Mann and other early proponents of public high schools as logical extensions of the common schools, high schools never achieved this goal. During the 19th century, through a progression of actions and events, the mission of the public high school moved further and further away from a common curriculum designed for all the people to one that was most representative of middle class respectability. When discussing the failure of the common school movement, Church gives the opinion that, since middle class parents were the main supporters of high schools, they ... "grasped the opportunity to differentiate their children from those of the poorer classes. While the 'common' grammar school introduced the lower classes to the dominant American values, the earliest high schools and other secondary training classes were filled by middle-class children whose parents sought to advantage them in the pursuit of wealth".[42]

Church stated further that "through World War One high schools buttressed middle class children against lower class competition for clerical and white collar employment, and provided many with the skills and credentials to enter the expanding professions late in the 19th century".43

The final domination of public high schools by elitist interests took place in 1892, when the Committee of Ten of the National Education Association proposed that the college preparatory track, giving heavy emphasis to study of the classics, should be the standard curriculum for all high school students. Through a series of meetings with many sub-groups the Committee of Ten, headed by Charles W. Eliot, President of Harvard, developed a model high school program with four major areas of concentration: classical, Latin-Scientific, Modern Langauge, and English. According to United States Commissioner of Education William T. Harris, who wrote a detailed analysis of the Committee's activities, nearly all of the Committee time was devoted to the Classical program.[44] Although no friend of vocationalism in public schools, Harris appeared to wish for a more balanced high school curriculum than was produced. Referring to the compromises and absurdities promulgated by the Committee of Ten, Harris suggested that the Committee had outreached its authority.

When considering the profound influence that the Committe of Ten had on the public high school curriculum, it should be recognized that this was not their primary mission. The work of the committee in 1892 came as a result of a recurring debate with respect to appropriate

standards for colleges. To help resolve this problem the National Education Association appointed several college presidents and other educators to recommend changes in the college admissions structure; an additional charge was to consider what secondary school subjects were appropriate for college preparation.[45]

In this last decade of the 19th century, marked by unrestricted capital speculation, violent clashes between labor and industry, social unrest and political turmoil, there was a mounting wave of criticism regarding the elitist posture of the public high school. In a period when private and public secondary schools combined served only 6.7% of their age group, and colleges 1.5% of theirs, the inherent failure of the public school system had become a burning issue.[46] During this period the state of education was as much a topic of concern as it is today; among the products of disenchantment was the generation of more study groups, the Progressive Education Movement, a rejection of manual training as a poor substitute for vocational education, and the vocational education drive that culminated with the passage of the Smith-Hughes Act of 1917.

If we view the specific provisions of the Smith-Hughes Act from the perspective that it was not so much the logical product of management, labor and agricultural interests as a violent and emotional reaction to the existing system of public education, its' limitations and anomalies may be more understandable. The clearly

anti-academic, non technical, home-farm-trade position inherent in the Act, with its built-in safeguards against the contamination or encroachment by the education establishment, has been criticized for placing vocationalism outside of the educational mainstream. When viewing the posture of public education at the time, however, there seemed to be no legitimate alternative. The vocational movement was something akin to the establishment of a country club by persons denied admission to the existing one.

rcs (11/30/82)

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